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A New *Guizhaphaenops* (Coleoptera, Trechinae) from Western Guizhou, South China

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Abstract A new cave species of the trechine genus *Guizhaphaenops* is described from Zhijin Xian in western Guizhou, South China, under the name of *G.* (s. str.) *zhijinensis*. It is closely related to *G. striatus* S. UÉNO, but is readily recognized on its elongate elytra with less prominent humeral angles. It usually coexists with *Zhijinaphaenops*, though evidently less differentiated than the members of the latter genus.

Describing an aphaenopsoid trechine genus with three species from Zhijin Xian in western Guizhou, we have noticed that the members of this remarkable genus, named *Zhijinaphaenops*, usually occur in coexistence with a *Guizhaphaenops* in the same limited habitats, and that the former became more profoundly differentiated than the latter which could be regarded as a later immigrant (cf. UÉNO & RAN, 2002, pp. 47–48, etc.). We are going to describe the new *Guizhaphaenops* in the present paper under the name of *G.* (s. str.) *zhijinensis*.

This new species is closely related to *G. striatus* S. UÉNO (2000, pp. 251, 255, figs. 6–7, 10) from Duolin Dong Cave, which is about 63 km distant to the south-southwest in a beeline from Chengguan, the centre of the distributional area of *G. zhijinensis*, but is readily distinguished from it by the different configuration of the elytra. Like the other known species of the subgenus *Guizhaphaenops*, it is incredibly variable, not only in size but also in many other points including the elytral chaetotaxy. The smallest specimen of the type series is only three-fourths of the largest one in body length, and appears specifically different from the latter. The prothorax is variable to some extent in configuration, above all in the shape of hind angles. The anterior dorsal pore on the third elytral stria is either present or absent, or present only on one

side; even if present, it usually bears a degenerated seta much shorter than the posterior one though sometimes bearing a fully developed seta and often lacking in it. The male genitalia are also variable in length, thickness and other minor details. Besides, all these variations are not geographical but individual, so that they cannot be used for recognizing subspecies. In the present paper, therefore, we are going to regard all the specimens from five different caves as belonging to a single variable species not classified into two or more geographical races. The only exception is a single female from Zhijin Dong Cave, which may be discriminated as a subspecies or even as a separate species when adequate material is available by future investigations (cf. *Notes* following the description of the new species).

The abbreviations used herein are the same as those explained in previous papers by the first author's.

Before going further, we wish to express our heartfelt thanks to Mr. FAN Ting of the Academia Sinica and the authorities of Zhijin Xian for their kind support of our field investigations made in the Zhijin area.

Guizhaphaenops (s. str.) ***zhijinensis*** S. UÉNO et RAN, sp. nov.

(Figs. 1–3)

Length: 5.80–8.00 mm (from apical margin of clypeus to apices of elytra); 6.45–8.85 mm (including mandibles).

Closely similar to *G. striatus* S. UÉNO, with which it agrees in most important features, but the elytra are more elongate on an average, with more obtuse humeral angles and less ample basal parts. Colour and microsculpture as in *G. striatus*.

Head as in *G. striatus*, similarly devoid of the posterior pair of supraorbital setae; HL/HW 1.18–1.34 (M 1.26), HL/PL 0.86–0.97 (M 0.91); antennae variable in length, usually reaching apical third of elytra, sometimes reaching only apical two-fifths of elytra, especially in females. Prothorax as in *G. striatus* though usually a little more contracted at base, widest at about middle or a little before that level; PW/HW 1.30–1.38 (M 1.34), PW/PL 0.92–1.00 (M 0.97), PW/PA ca. 1.58–1.78 (M ca.1.70), PW/PB ca. 1.67–1.86 (M ca. 1.74), PB/PA ca. 0.92–1.04 (M ca. 0.98); front angles usually distinct though small; hind angles usually marked though very obtuse, sometimes completely rounded off; base briefly and very slightly emarginate on each side inside hind angle when the latter is distinctly marked; postangular pair of marginal setae missing.

Elytra relatively elongate, widest at about middle, and a little more gradually narrowed towards bases than towards apices; EW/PW 1.71–1.92 (M 1.81), EL/PL 2.84–3.13 (M 2.98), EL/EW 1.60–1.81 (M 1.70); humeral angles very obtuse, almost rounded; prehumeral borders nearly straight and moderately oblique; humeral margins almost invisibly serrulate and vestigially ciliated; sides nearly straight behind shoul-

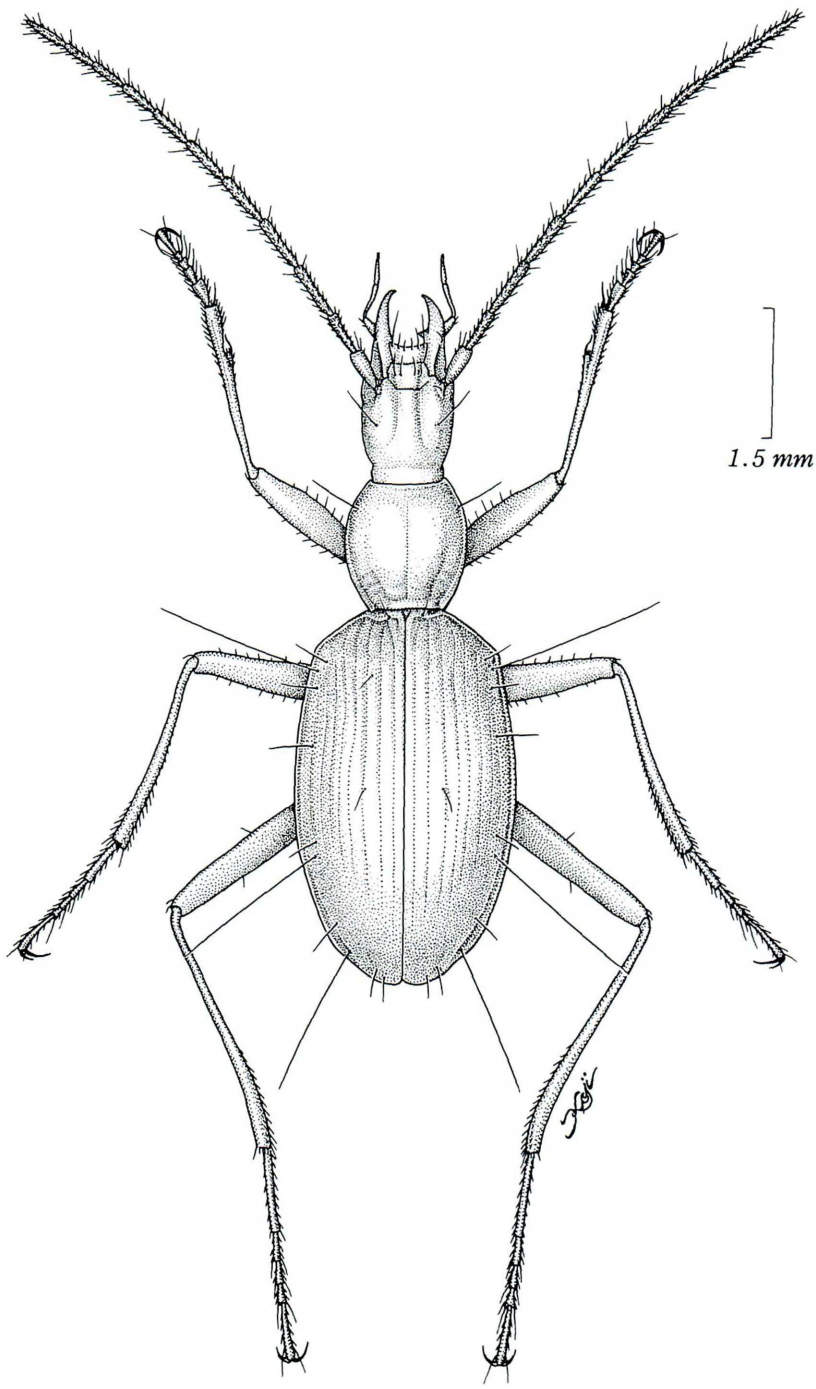
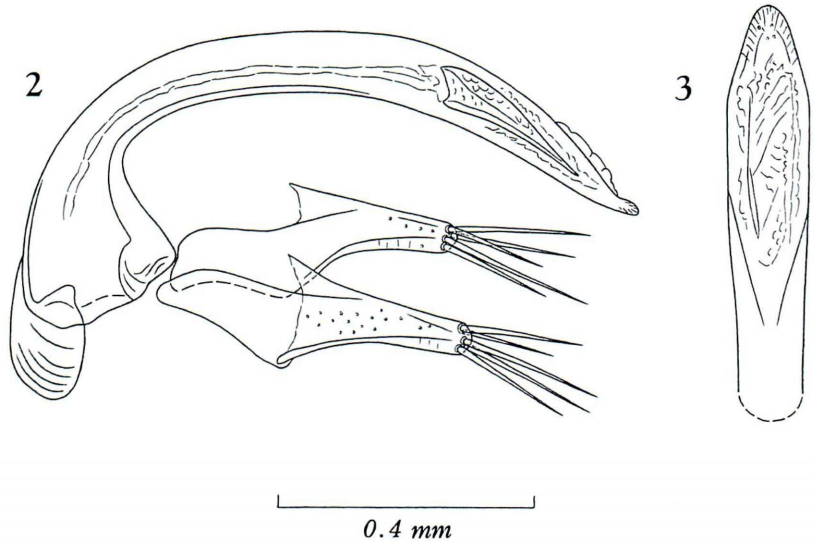


Fig. 1. *Guizhaphaenops* (s. str.) *zhijinensis* S. UÉNO et RAN, sp. nov., ♂, from Wanke Dong Cave at Houchang.



Figs. 2–3. Male genitalia of *Guizhaphaenops* (s. str.) *zhijinensis* S. UÉNO et RAN, sp. nov., from Wanke Dong Cave at Houchang; left lateral view (2), and apical part of aedeagus, dorso-apical view (3).

ders, then feebly arcuate, and rather abruptly rounded at apices, which are either conjointly curved or forming a small obtuse re-entrant angle at suture; striae superficial though nearly entire, shallower than in *G. striatus*, indistinctly crenulate, becoming nearly obsolete at the sides and in apical areas; scutellar striole evanescent; apical striole rudimentary; stria 3 originally with two setiferous dorsal pores at 1/7–1/6 and 2/5–1/2 from base, respectively; in a male paratype, an extra setiferous pore present on the left elytron between the normal anterior and posterior pores; posterior dorsal pore always setiferous and ordinarily developed; anterior dorsal pore variable, either present or absent, or present only on one side, usually setiferous if present, though quite variable in the development of setae and sometimes lacking in it; preapical pore always absent.

Ventral surface and legs as in *G. striatus*, though the pubescence on ventrites is rather sparse on apical and penultimate ones.

Male genital organ very small and lightly sclerotized, markedly different from that of *G. striatus* in the slenderer apical part, strongly bent basal part, and acicular apical part of copulatory piece. Aedeagus only one-fifth as long as elytra in medium-sized individuals, proportionally a little larger than that in small individuals, very slender, regularly arcuate, and nearly parallel-sided in profile, with large basal part and short apical lobe; basal part ventrally dilated in profile, with small basal orifice and large protrudent sagittal aileron; viewed laterally, apical part gradually tapered to apical lobe, which is short, gently reflexed, and blunt at the extremity; viewed dorsally, apical part

narrowly rounded at the extremity; ventral margin widely and evenly emarginate in profile. Copulatory piece about one-fourth as long as aedeagus, narrow, acuminate, and forming acicular apical part. Styles short, with relatively narrow apical parts, each bearing four or five apical setae.

Type series. Holotype: ♂, allotype: ♀, paratypes: 9♂♂, 4♀♀ (incl. 1 teneral ♀), 15–X–2002, S. UÉNO leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Limestone cave called Wanke Dong (formerly called Aoke Dong), 1,740 m in altitude, at Houchang Cun of Santang Zhen in Zhijin Xian, western Guizhou, South China.

Further specimens examined. 4♂♂, Ganlao Dong Cave, 1,610 m alt., Houchang Cun, Santang Zhen, Zhijin Xian, 15–X–2002, S. UÉNO & J. RAN leg.; 7♂♂, 1♀ (incl. 1 teneral ♂), Dahei Dong Cave, 1,530 m alt., Mawozhai Cun, Houzhai Xiang, Zhijin Xian, 15–X–2002, S. UÉNO & J. RAN leg.; 7♂♂, 2♀♀ (incl. 1 teneral ♂), Shepayan Dong Cave, 1,370 m alt., Hehua Cun, Chengguan Zhen, Zhijin Xian, 13–X–2002, S. UÉNO & J. RAN leg.; 1♂, Lianhua Dong Cave, 1,330 m alt., Xingxiu Cun, Chengguan Zhen, Zhijin Xian, 13–X–2002, S. UÉNO leg.; 1♀, Zhijin Dong Cave, 1,310 m alt., Guandu Cun, Babu Zhen (now called Guanzhai Cun of Guanzhai Xiang), Zhijin Xian, 19–VII–1996, LI Dao Hong leg. All in NSMT.

Notes. This new species has so far been known from six caves in Zhijin Xian, three of them (Wanke Dong, Ganlao Dong and Dahei Dong) lying in the Santang area at the southwestern part, two (Shepayan Dong and Lianhua Dong) in the Chengguan area at the central part, and one (Zhijin Dong) in the Babu area at the northern part. Specimens from the first five caves are generally similar in their morphology, and the ranges of their variations largely overlap one another. Ranges of their body lengths and standard ratios of their body parts are as follows:

〈Ganlao Dong Cave〉 Body length: 6.70–7.65 mm [7.40–8.50 mm incl. mandibles], HL/HW 1.24–1.29 (M 1.27), HL/PL 0.86–0.93 (M 0.89), PW/HW 1.32–1.39 (M 1.35), PW/PL 0.93–0.97 (M 0.94), PW/PA ca. 1.68–1.79 (M ca. 1.74), PW/PB ca. 1.69–1.77 (M ca. 1.74), PB/PA ca. 0.96–1.05 (M ca. 1.00), EW/PW 1.81–1.85 (M 1.84), EL/PL 2.83–2.96 (M 2.89), EL/EW 1.64–1.71 (M 1.67).

〈Dahei Dong Cave〉 Body length: 6.35–7.70 mm [7.05–8.50 mm incl. mandibles], HL/HW 1.24–1.36 (M 1.30), HL/PL 0.88–0.94 (M 0.91), PW/HW 1.32–1.44 (M 1.37), PW/PL 0.93–1.02 (M 0.96), PW/PA ca. 1.67–1.81 (M ca. 1.73), PW/PB ca. 1.78–2.00 (M ca. 1.85), PB/PA ca. 0.87–1.00 (M ca. 0.93), EW/PW 1.71–1.86 (M 1.80), EL/PL 2.87–3.01 (M 2.93), EL/EW 1.65–1.72 (M 1.69).

〈Shepayan Dong Cave〉 Body length: 6.40–7.60 mm [7.05–8.30 mm incl. mandibles], HL/HW 1.17–1.37 (M 1.27), HL/PL 0.82–0.98 (M 0.89), PW/HW 1.29–1.38 (M 1.35), PW/PL 0.91–1.02 (M 0.95), PW/PA ca. 1.57–1.73 (M ca. 1.67), PW/PB ca. 1.60–1.76 (M ca. 1.68), PB/PA ca. 0.96–1.05 (M ca. 1.00), EW/PW

1.74–1.85 (M 1.79), EL/PL 2.76–3.05 (M 2.87), EL/EW 1.68–1.74 (M 1.70).

〈Lianhua Dong Cave〉 Body length: 6.55 mm [7.20 mm incl. mandibles], HL/HW 1.20, HL/PL 0.85, PW/HW 1.40, PW/PL 0.99, PW/PA ca. 1.70, PW/PB ca. 1.71, PB/PA ca. 0.99, EW/PW 1.69, EL/PL 2.88, EL/EW 1.72.

As is readily understood from the above list, the Dahei Dong specimens are prominent in the exceptionally high PW/PB value. This is mainly due to reduction of the pronotal hind angles, which are usually rounded off. In a small male, the estimated width of the pronotal base attains merely to a half of that of the widest part. On the other hand, the aedeagus is a little shorter with smaller basal part in the specimens from the Chengguan area (Shepayan Dong and Lianhua Dong Caves) than in the type series. Incidentally, Shepayan Dong Cave, which was not described in our 2002 paper, lies between Ziyan Dong and Xiaoyao Dong Caves, both of which harbour *Zhijinaphaenops pubescens* but no *Guizhaphaenops*. It is a sink swallowing the water of a short surface stream. *Guizhaphaenops* was found at the bottom, from beneath a heap of muddy stones and vegetable debris washed in from the outside.

What is of special interest is a female specimen taken in Zhijin Dong Cave. Having been preserved long in spiritus, it is discoloured and wholly darkened, and besides, the elytra are partially crushed. However, it differs from all the other specimens of *G. zhijinensis* in the narrow prothorax which is widest at three-fifths from base and has the sides almost straight in basal fourth. Standard ratios of body parts are: HL/HW 1.18, HL/PL 0.84, PW/HW 1.21, PW/PL 0.86, PW/PA 1.48, PW/PB 1.63, PB/PA 0.91, EW/PW 1.99, EL/PL 2.84, EL/EW 1.66. The body measures 7.35 mm from the apical margin of clypeus to the apices of elytra, and 7.95 mm including mandibles, and the antennae are relatively short, only reaching apical two-fifths of elytra. It is therefore most probable that the Zhijin Dong population of *Guizhaphaenops* belongs to a subspecies of its own or a species independent of *G. zhijinensis*. Unfortunately, however, we failed in obtaining fresh material of this *Guizhaphaenops* in Zhijin Dong and nearby caves, and prefer to leave the final determination of its systematic status for future investigations.

要　　約

上野俊一・冉　景丞：中国貴州省の西部で発見された *Guizhaphaenops* 属チビゴミムシの1新種．—— 中国貴州省の西部，织金县の石灰洞6ヵ所から，*Guizhaphaenops* 属のチビゴミムシの1新種を記載し，これに *Guizhaphaenops zhijinensis* S. UÉNO et RAN という新名を与えた．この種は，同所的に分布する *Zhijinaphaenops* 属のメクラチビゴミムシ類に比べて種分化の程度が低く，しかも種内の変異はいちじるしい．おそらく *Zhijinaphaenops* よりあとから织金县付近に分布を拡げてきて比較的，新しい時代に定着したものだろう．

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A New Record of *Aesalus satoi* (Coleoptera, Lucanidae) from Vietnam

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As the first record of the lucanid genus *Aesalus* from the Indochina Region, *Aesalus satoi* was originally described based on the specimens collected on Mt. Pan, northeastern Laos (ARAYA & YOSHITOMI, 2003), but no additional specimens have been recorded since then. Recently, during a second expedition of a joint party of Japanese and Vietnamese entomologists, made in 2002, the second author collected an additional male of this species in Lao Cai Province of North Vietnam. Here, we will report the new record of this interesting lucanid beetle from Vietnam. In the following description, PEL denotes pronotum–elytra length, and EW elytra width.

Specimen examined. 1♂, Deo Tram Ton, near Sa Pa, Lao Cai Prov., N.-Vietnam, 21–VI–2002, S. NOMURA leg.

Notes. The present Vietnamese material was captured by a light-trap set on the pass at about 1,850 m in altitude, whose surroundings were grassland with shrubbery, and steep slopes were covered with an evergreen broad-leaved forest. It was cloudy with occasional drizzle during the light-trapping, and the individual flew to light between 20 and 21 o'clock. These facts indicate that this species is an active nocturnal flier. The Vietnamese individual is almost identical with the type specimens from Laos in both the external and genitalic morphologies (Figs.